



Implementation Guideline

Bakong Open API Documentation

Version 1.0.2

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Change Logs

Version	Date	Description
1.0.0	21.05.2021	Initial document.
1.0.1	27.07.2021	Add check transaction status api.
1.0.2	04.11.2021	Add check Bakong account api.

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I. Introduction

1. Purpose

This document describes the detailed specification of Bakong open API offered by National Bank of Cambodia.

The expected readers are NBC technical team and third-party technical team. This can be used as reference for any interest related to the API mentioned in this document.

2. Scope

This document contains the complete description of the API specification including: endpoint, status code, request and response sample.

3. Overall API

No	Name	Method	URL
1	Request token	POST	{{baseUrl}}/v1/request_token
2	Verify token	POST	{{baseUrl}}/v1/verify
3	Renew token	POST	{{baseUrl}}/v1/renew_token
4	Generate deeplink	POST	{{baseUrl}}/v1/generate_deeplink_by_qr
5	Check transaction by md5	POST	{{baseUrl}}/v1/check_transaction_by_md5
6	Check transaction by full hash	POST	{{baseUrl}}/v1/check_transaction_by_hash
7	Check transaction by short hash	POST	{{baseUrl}}/v1/check_transaction_by_short_hash

II. API Documentation

Status Code

- HTTP Response Code

Code	Text
200	Ok
400	Bad request
401	Unauthorized
403	Forbidden
404	Not found
429	To many request
500	Internal server error

- Custom Code

Key	Type	Code	Text
Code	Int		
		0	Success
		1	Fail
Error code	Int		
		1	Transaction could not be found. Please try again.
		2	Sorry, the system does not support static QR code.
		3	Transaction failed.
		4	Error occurred on requesting deeplink from provider.
		5	Missing required fields.
		6	Unauthorized.
		7	Email server has been down.
		8	Email has been registered already.
		9	Cannot connect to server. Please try again later.
		10	Not registered yet.

1. Request Token

1.1. API Specifications

HTTP Method	POST
Name	Request token
Endpoint	{{baseUrl}}/v1/request_token
Description	This api is used for registering integrator information to get access tokens.

1.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Content-Type	String	0		application/json
Body Parameters				
email	String	1	MaxLen: 30	The email that used to get a token.
organization	String	1	MinLen: 1 MaxLen: 100	The organization name.
project	String	1	MinLen: 1 MaxLen: 100	The project name.

Sample Request

```
{  
  "email": "string",  
  "organization": "string",  
  "project": "string"  
}
```

1.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
data	Object	1	
errorCode	Int	1	Error code.
responseCode	Int	1	Response code success or fail.
responseMessage	String	1	The request result message.

Sample Response

```
{  
  "data": null,  
  "errorCode": null,  
  "responseCode": 0,  
  "responseMessage": "Email has been sent"  
}
```

2. Verify Token

2.1. API Specifications

HTTP Method	POST
Name	Verify token
Endpoint	{{baseUrl}}/v1/verify
Description	This api is used for verifying code before sending a token.

2.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Content-Type	String	0		application/json
Body Parameters				
code	String	1	MinLen: 20 MaxLen: 20	The verification code that is sent to the registered mail.

Sample Request

```
{  
  "code": "string"  
}
```


2.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
data		1	
token	String	1	
errorCode	Int	1	Error code.
responseCode	Int	1	Response code success or fail.
responseMessage	String	1	The request result message.

Sample Response

```
{
  "data": {
    "token":
    "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJleHAiOiJlMTE1NDgsImldCI6MTYxNzA3NjM0OCwiZGF0YSI6eyJpZCI6ImQ0MDczMWQzZGM3YjRlMSJ9fQ.aPZF5TYT4oh2T5XAGcwobiDEJF1wqqEoLkIDvq-hsM"
  },
  "errorCode": null,
  "responseCode": 0,
  "responseMessage": "Token has been issued"
}
```

3. Renew Token

3.1. API Specifications

HTTP Method	POST
Name	Renew token
Endpoint	{{baseUrl}}/v1/renew_token
Description	This api is used to renew a token when the previous one expires.

3.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Content-Type	String	0		application/json
Body Parameters				
email	String	1	MaxLen: 30	

Sample Request

```
{  
  "email": "string"  
}
```

3.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
data		1	
token	String	1	
errorCode	Int	1	Error code.
responseCode	Int	1	Response code success or fail.
responseMessage	String	1	The request result message.

Sample Response

```
{  
  "data": {  
    "token":  
    "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJleHAiOiJlMTE1NjlsImhhdCI6MTYxNzA3  
    NjM2MiwiZGF0YSI6eyJpZCI6ImQ0MDczMWQzZGM3YjRlMSJ9fQ.ILDtDt_3qyxyHmBWRhVe  
    _6CElt9gNAOxu_8hb5Ct1Wo"  
  },  
  "errorCode": null,  
  "responseCode": 0,  
  "responseMessage": "Token has been issued"  
}
```

4. Generate Deeplink

4.1. API Specifications

HTTP Method	POST
Name	Generate deeplink
Endpoint	{{baseUrl}}/v1/generate_deeplink_by_qr
Description	This api is used to generate deeplink url.

4.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Content-Type	String	0		application/json
Body Parameters				
qr	String	1		
sourceInfo		0		
appIconUrl		1		Your app icon
appName		1		Your app name
appDeepLinkCallback		1		Deeplink url for opening your app after payment is completed.

Sample Request

```
{
  "qr":
    "00020101021229190015gg_hh_1980@amkb52045999530384054031685802KH5905Gg
    +H h6010Phnom+Penh62100806#hello630498B8",
  "sourceInfo": {
    "appIconUrl": "https://bakong.nbc.org.kh/images/logo.svg",
    "appName": "Bakong",
    "appDeepLinkCallback": "https://bakong.nbc.org.kh/" }
}
```

4.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
errorCode	Int	1	Error code.
responseCode	Int	1	Response code success or fail.
responseMessage	String	1	The request result message.
data		1	
shortLink	String	1	Generated short links will be different every time api is called and also depend on which api url is being used.

Sample Response

```
{
  "data": {
    "shortLink": "https://bakongsit.page.link/dGZAr1McBs1UaNmH9",
    "errorCode": null,
    "responseCode": 0,
    "responseMessage": "Getting deep link successfully"
  }
}
```

5. Check Transaction Status by MD5

5.1. API Specifications

HTTP Method	POST
Name	Check transaction by md5
Endpoint	{baseUrl}}/v1/check_transaction_by_md5
Description	This api is used to check transaction status by md5.

5.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Authorization	String	1		"Bearer <access token>"
Content-Type	String	1		"application/json"
Body Parameters				
md5	String	1	MinLen: 1 MaxLen: 255	md5 hash got from QR string encryption.

Sample Request

```
{
  "md5": "d60f3db96913029a2af979a1662c1e72"
}
```

5.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
data		1	
hash	String	1	Transaction hash.
fromAccountId	String	1	
toAccountId	String	1	
currency	String	1	Transaction currency.
amount	String	1	Transaction amount.
description	String	0	
responseCode	Int	1	Error code.
responseMessage	Int	1	Response code success or fail.

Sample Response

Success

```
{
  "responseCode": 0,
  "responseMessage": "Getting transaction successfully.",
  "data": {
    "hash":
"8465d722d7d5065f2886f0a474a4d34dc6a7855355b611836f7b6111228893e9",
    "fromAccountId": "rieu_dhqj_1984@devb",
    "toAccountId": "bridge_account@devb",
    "currency": "USD",
    "amount": 1.0,
    "description": "testing bakong generator"
  }
}
```

Failed

```
{  
  "data": null,  
  "errorCode": 3,  
  "responseCode": 1,  
  "responseMessage": "Transaction failed."  
}
```

Not Found

```
{  
  "data": null,  
  "errorCode": 1,  
  "responseCode": 1,  
  "responseMessage": "Transaction could not be found. Please check and try again."  
}
```


6. Check Transaction Status by Full Hash

6.1. API Specifications

HTTP Method	POST
Name	Check transaction by full hash
Endpoint	{{baseUrl}}/v1/check_transaction_by_hash
Description	This api is used to check transaction status by full hash.

6.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Authorization	String	1		"Bearer <access token>"
Content-Type	String	1		"application/json"
Body Parameters				
hash	String	1	MinLen: 1 MaxLen: 255	

Sample Request

```
{
  "hash": "dcd53430d3b3005d9cda36f1fe8dedc3714ccf18f886cf5d090d36fee67ef956"
}
```

6.3 Response

Response Parameters

Parameter	Type	Mandatory	Description
data		1	
hash	String	1	Transaction hash.
fromAccountId	String	1	
toAccountId	String	1	
currency	String	1	Transaction currency.
amount	String	1	Transaction amount.
description	String	0	
responseCode	Int	1	Error code.
responseMessage	Int	1	Response code success or fail.

Sample Response

```

Success
{
  "responseCode": 0,
  "responseMessage": "Getting transaction successfully.",
  "data": {
    "hash":
"8465d722d7d5065f2886f0a474a4d34dc6a7855355b611836f7b6111228893e9",
    "fromAccountId": "rieu_dhqj_1984@devb",
    "toAccountId": "bridge_account@devb",
    "currency": "USD",
    "amount": 1.0,
    "description": "testing bakong generator"
  }
}

```

Failed

```
{  
  "data": null,  
  "errorCode": 3,  
  "responseCode": 1,  
  "responseMessage": "Transaction failed."  
}
```

Not Found

```
{  
  "data": null,  
  "errorCode": 1,  
  "responseCode": 1,  
  "responseMessage": "Transaction could not be found. Please check and try again."  
}
```

7. Check Transaction Status by Short Hash

7.1. API Specifications

HTTP Method	POST
Name	Check transaction by short hash
Endpoint	{{baseUrl}}/v1/check_transaction_by_short_hash
Description	This api is used to check transaction status by short hash.

7.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Authorization	String	1		"Bearer <access token>"
Content-Type	String	1		"application/json"
Body Parameters				
hash	String	1	MinLen: 8 MaxLen: 8	
amount	Number	1		Can be int or float
currency	String	1		'USD' or 'KHR'

Sample Request

```
{
  "hash": "8465d722",
  "amount": 1.0,
  "currency": "USD"
}
```

7.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
data		1	
hash	String	1	Transaction hash.
fromAccountId	String	1	
toAccountId	String	1	
currency	String	1	Transaction currency.
amount	String	1	Transaction amount.
description	String	0	
responseCode	Int	1	Error code.
responseMessage	Int	1	Response code success or fail.

Sample Response

Success

```
{
  "responseCode": 0,
  "responseMessage": "Getting transaction successfully.",
  "data": {
    "hash":
"8465d722d7d5065f2886f0a474a4d34dc6a7855355b611836f7b6111228893e9",
    "fromAccountId": "rieu_dhqj_1984@devb",
    "toAccountId": "bridge_account@devb",
    "currency": "USD",
    "amount": 1.0,
    "description": "testing bakong generator"
  }
}
```

Failed

```
{  
  "data": null,  
  "errorCode": 3,  
  "responseCode": 1,  
  "responseMessage": "Transaction failed."  
}
```

Not Found

```
{  
  "data": null,  
  "errorCode": 1,  
  "responseCode": 1,  
  "responseMessage": "Transaction could not be found. Please check and try again."  
}
```

8. Check Bakong Account

4.1. API Specifications

HTTP Method	POST
Name	Check Bakong Account
Endpoint	{{baseUrl}}/v1/check_bakong_account
Description	This api is used to check if a bakong account exists

4.2. Request

Request Parameters

Parameter	Type	Mandatory	Constraint	Description
Header parameters				
Authorization	String	1		"Bearer <access token>"
Content-Type	String	0		application/json
Body Parameters				
accountId	String	1		Bakong account ID

Sample Request

```
{
  "accountId": "user@bank"
}
```

4.3. Response

Response Parameters

Parameter	Type	Mandatory	Description
errorCode	Int	1	Error code.
responseCode	Int	1	Response code success or fail. <ul style="list-style-type: none">• responseCode:0 means an account exists.• responseCode:1 means an account does not exist.
responseMessage	String	1	The request result message.
data	Null	1	

Success Response

```
{
  "responseCode": 0,
  "responseMessage": "Account ID exists",
  "errorCode": null,
  "data": null
}
```

Fail Response

```
{
  "responseCode": 1,
  "responseMessage": "Account ID not found",
  "errorCode": 11,
  "data": null
}
```